

**PROGRESS REPORT OF  
WOLF POPULATION MONITORING  
IN WISCONSIN  
FOR THE PERIOD  
APRIL - SEPTEMBER 2001**

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## ABSTRACT

Thirty-five wolves (including 2 recaptures) were caught in spring and summer 2001, and 24 were fitted with radio collars in Wisconsin. Fifty radio collared wolves were monitored during the period; 4 wolves died, 1 dispersed into Michigan, and 3 signals were lost. Thus 42 wolves were on the air by early fall. Howl surveys were conducted in 41 of the 70 packs in the state, and pups were detected in at least 23 packs. Reports of wolf observations were received from 23 Wisconsin counties during spring and summer. Eight wolves were captured on a farm following depredation on calves; 7 were relocated to north central and north east Wisconsin, and one was released near the farm, but fitted with a shock collar to keep her away from the farm.

## INTRODUCTION

Wolves re-colonized Wisconsin in the mid 1970's after being extirpated for about 15 years (Wydeven et al 1995). The Wisconsin Department of Natural Resources (DNR) has monitored the wolf population annually since 1979, and monitoring efforts were reinforced in the 1989 recovery plan (Wisconsin DNR 1989), and the 1999 wolf management plan (Wisconsin DNR 1999). Spring and summer monitoring included live trapping, radio collaring, howl surveys, and radio monitoring of collared wolves, while winter monitoring included snow tracking of wolves, monitoring of collared wolves, and estimation of state wolf population (Wisconsin DNR 1999). Surveys from last winter determined a state wolf population of 251-253 wolves, in 66 packs and at least 10 loners (Wydeven et al 2001). A state delisting goal set in the 1999 plan was a population of 250 wolves outside of Indian reservations (Wisconsin DNR 1999). Last winter 243-246 wolves occurred outside of Indian reservations. The Wisconsin wolf population has increased at an average annual rate of 19% since 1985, and will probably achieve the recovery goal next year. The late winter count of wolves is the level at which the wolf population goals are assessed. The current report covers monitoring activity from April through September 2001.

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## METHODS

Wolves were live trapped and radio collared following procedures of Mech (1974) and Wydeven et al 1995. Trapping was done from 28 April to 7 September 2001. Only wolves weighing more than 30 pounds were fitted with radio collars. Radio collared wolves were generally located weekly by DNR pilots with fixed-wing airplanes, although wolves that appeared to be dispersing were located more frequently.

Satellite collars were used to monitor 2 wolves (289F, 311F); normally 3-4 useable radio locations were obtained per week. Although the satellite collars provide more frequent locations, battery length and precision of locations are much lower than conventional VHF collars (Ballard et al 1995).

Home range area for the summer period (15 April-14 September) was determined with the minimum convex polygon (Mohr 1947). Isolated radio locations located over 5 km from other points were considered extraterritorial moves as done by Fuller (1989); when 2 separate clusters of radio locations existed with regular travel between them, then areas in between were considered part of the home range regardless of distance, as long as both clusters did not occur in another pack territory. Home Range areas were calculated only for wolves that occupied stable areas, and did not include wolves that were dispersing.

Howl surveys (Harrington and Mech 1982) were used to determine pup production, location of rendezvous sites, summer location of non collared packs, and to determine presence of new packs. Howl surveys are useful for determining occurrence of wolves and presence of pups, but not reliable for accurate counts of wolves beyond 2-3 adults and 2-3 pups (Harrington and Mech 1982).

## RESULTS AND DISCUSSION

DNR and USDA-Wildlife Services live trapped 35 wolves during the spring and summer 2001, and 24 wolves were radio collared (Table 1). Eight wolves were trapped from a farm in northern Burnett County by USDA-Wildlife Services; including 1 wolf captured and relocated 5 miles away and fitted with a shock collar (367F), 3 located 170 miles to the east into Forest County (394M, 395M, and 724F), and 4 pups released into northwest Oneida County, 116 miles to the east (390F, 391M, 392M and 393F). Captured wolves during spring and summer included 8 adult males (average weight 78.8 lbs), 7 adult females (average weight 73.3 lbs), 2 yearling males (weight of one 67 lbs), 2 yearling females (average weight 58 lbs), 6 pup males (weight range 19-44 lbs), 10 pup females (weight range 22-35 lbs). A total of 1573 trap nights were used by DNR to capture 27 wolves, and included 16 wolves radio collared; overall rate was 58.3 trap nights per wolf, and 98.3 trap nights per radio collared wolf.

Figure 1 illustrated the 66 wolf packs detected in Wisconsin in late winter 2001. Figure 1 does not include the Stuntz Brook Pack because only a single animal was detected, but summer surveys indicated that at least 3 adults occurred in the area and produced pups. It was not clear during summer surveys whether Little Sioux River area, Siskiwit Lake, and Sand Point area represent one, two or three separate packs, and are referred to in this report as the Little Sioux River/Siskiwit Lake pack. It appeared that the Yellow River pack extended westward and included portions of the Beaver Creek area in Juneau County. Two wolves were detected in the Clifford area of Oneida County, but only one had been detected during winter. Wolf 332F had apparently found a mate and set up a territory in Pelican Lake area of southern Oneida County, but had not been detected over winter. A yearling female was caught in the area vacated by the Little Rice River Pack last winter, but it was not clear if the pack re-established. Wolf 300F was caught as a lactating female in the Harrison Hills area of eastern Lincoln County; this pack was not found in winter. Therefore, there were at least 70 packs in Wisconsin over summer; this count does not include packs such as the Chaney Lake pack in east Iron County, and Moraine Lake Pack in northwest Vilas County that occur mostly in Michigan.

During the spring and summer, fifty radio collared wolves were monitored in Wisconsin (Table 2). Wolves were monitored in 33 Wisconsin packs, 1 Minnesota pack, and included 4 probable loners or dispersers. Signals were lost for 4 wolves (155M, 241F, 267M, and 318F), although the signal for 318F was lost after dispersal eastward into Michigan. Four wolves went off the air due to death including 352F following capture, and pups 390F, 391M, and 392M after being translocated. Wolves monitored during spring and summer 2001 included 20 adult males, 20 adult females, 3 yearling males, 2 yearling females, 3 pup males and 2 pup females.

Mean summer home range for wolves located 20 or more times was 32 square miles for 16 wolves (Table 3). Home range areas were similar for northern and central Wisconsin. Average home range area for adults with 20 or more locations was 31 square miles, and varied from 9 square miles for M036F of the West Firelane Pack to 57 square miles for 309F of the Iron Run Pack. Females with pups often have small home range areas in spring and summer.

### Wolf Pack and Lone Wolf Summaries

Listed below are summaries of spring and summer surveys of Wisconsin packs and individual wolves across the state (nicknames used for wolves in the field are listed in the appendix). Approximate locations of pack areas are shown in figure 1.

Crex Meadows Pack - Burnett County Two wolves last winter; wolf 388M (adult male) and 389F (female pup too small to collar) caught on 4 trap nights in this pack on 25 July 2001; 388M occupied a 19 square mile area with 8 radio locations; 3+ pups were heard in one howl survey, and a DNR technician observed 5 pups in this territory.

Chase Brook Pack - Burnett County Four wolves detected last winter; wolf 724F (adult female) and wolf 367F (adult female) seemed to split the territory in two; wolf 367F seemed to have deposed 724F and apparently was the new alpha female. During summer 367F occupied a 7 square mile (19 locations) home range west of Highway 35 and 724F occupied 6 square miles (19 locations) east of Highway 35. DNR spent 73 trap nights on this territory and adult female 352F was caught on 1 May 2001, but died from reaction to immobilization drugs. Wolf 367F was caught on 26 May 2001 by USDA-Wildlife Services after depredation occurred on calves on a nearby farm. In July and August depredation again resumed on the farm and 2 adults (395M, 724F), 1 yearling (394M), and 4 pups (390F, 391M, 392M, and 393F) were removed from the farm. Three howl surveys were conducted in the territory, and the last survey on 27 August indicated 2 adults (including 367F) and 1 pup remained in the territory. See below under "Depredation" for more details.

Totagatic River Pack - Burnett & Douglas Counties Wolves 294M (adult male) and 295F (adult female) were monitored in this territory throughout the summer; summer home range was 25 square miles (20 locations) for 294M and 28 square miles (21 locations) for 295F. Both wolves were together most of the time. No howl surveys were conducted, but pup production was not suspected.

Moose Road Pack - Douglas County Two wolves in this pack last winter; wolf 155M (adult male) occupied a summer home range of 23 square miles (20 locations); his signal was lost after 27 August; no howl surveys conducted.

Truck Trail Pack - Douglas County Five wolves detected last winter; wolf 268M (adult male) occupied a 46 square mile (17 locations) home range; howl surveys were not conducted; pup production was suspected.

North Empire Pack - Douglas County Wolf 267M signal was lost after 2 April 2001. He was on the air since 28 August 1996. No surveys were conducted in this territory over summer; 2 wolves detected last winter.

South Empire Pack - Douglas County Wolf 297M (adult male) occupied a 59 square mile home range (18 locations) in this territory; 3 year old male 296M from the Crotte Creek pack also made several trips into this pack's territory; pup production was suspected, but no howl surveys were made; 4 wolves detected last winter.

Crotte Creek Pack - Douglas County Six wolves detected in pack last winter; wolf 296M (adult male) occupied a home range area of 28 square miles (21 locations) in this area; he made several extra-territorial moves into the South Empire pack during summer; pup production was suspected, but no howl surveys were made.

Bird Sanctuary Pack - Douglas County Four wolves detected last winter; no collared wolf in this pack; a volunteer heard howling by 3 adults and 2+ pups on 12 October 2001. No other surveys this summer; wolves detected last winter.

Chain Lake Pack - Douglas & Washburn Counties Three wolves detected last winter; Wolf 291M (adult male) occupied a 52 square mile (21 locations) home range; the pack seemed to have expanded eastward and southward into former portions of the Frog Creek pack territory; no trapping or howl surveys, but pup production was suspected.

Shoberg Lake Pack - Douglas County Four wolves detected last winter; a total of 187 trap nights were live trapped in this territory; no wolves caught; tracks indicate pups present; 2 dogs killed in 2 instances in July.

Moose Lake Pack - Douglas County Four wolves in this pack last winter; no howl surveys or livetrapping over summer; a depredation on a dog and poultry near Bennett, may have been from a pack member.

Casey Creek Pack - Douglas County Four wolves detected last winter; a total of 91 trap nights were conducted in this territory, and 2 pups (360M, 361F) were caught in June, but too small to collar; no additional surveys. Five dogs were killed by this pack in a single incident in September.

Tranus Lake Pack - Washburn County Wolf 292M (adult male) occupied a 22 square mile home range (21 locations); no howl survey, but 3 pups were observed in territory on 5 July 2001. Two dogs were killed by this pack in September.

Stuntz Brook Pack - Washburn County Only 1 wolf found in area over winter, but during howl survey on 13 August, 3 adults and 2+ pups were heard; no livetrapping conducted.

Frog Creek Pack - Washburn & Douglas Counties Four wolves detected last winter; no surveys done in this study period; the pack lost its alpha female in winter, and the Chain Lake Pack appeared to be occupying northern portions of Frog Creek's former territory.

Oriente Falls Pack - Bayfield & Douglas Counties Two wolves detected last winter; livetrapping attempted, with 15 trap nights in June; no captives; no howl surveys.

Flag River Pack - Bayfield County Five wolves detected last winter; a total of 66 trap nights of livetrapping were done in June, but no wolf caught; 1 howl survey in August, no wolves heard; pup production was determined by track observations.

Little Sioux River/Siskiwit Lake Pack - Bayfield County Pack detected in September 2000 by hunters, and at least 3 animals detected over winter; a total of 181 trap nights conducted in June; adult female (367F) caught on 25 June and male pup (366M) caught on 20 June (not collared); female 369F covered a summer home range of at least 35 square miles (12 locations); 2 howl surveys in July conducted and pups heard on both; 5 pups and 2 adults observed 25 July and two more adults detected by howl survey; 1 pup found dead on 6 September, possible vehicle collision.

Moreland Lake Pack - Bayfield County 3 wolves detected last winter; one howl survey in August, one wolf heard; no livetrapping.

Rainbow Lake Pack - Bayfield County 2 wolves detected last winter; one howl survey by volunteers, but no wolves heard; a bear hunter reported seeing 4 wolf pups in the area in July.

Bearsdale Pack - Bayfield County Five wolves were detected in the area last winter; no livetrapping was done in this area; no wolves were heard during howl survey, but wolf sign found.

Smoky Hill Pack - Bayfield & Sawyer Counties Four wolves detected last winter; no livetrapping; no wolves heard on 1 howl survey, but wolf sign found.

Ghost Lake Pack - Bayfield & Sawyer Counties Wolf 241F (adult female) and 250M (yearling male) occupied a 48 square mile (18 locations); no howl surveys were conducted, but pup production was not suspected.

Hellhole Creek Pack - Bayfield & Ashland Counties Six or seven wolves detected last winter; no livetrapping or howl surveys, but adults heard howling on west side of territory.

Black Lake Pack - Ashland & Sawyer Counties Adult female 370F was caught on 30 June 2001, and occupied a summer home range of 28 square miles (11 locations); 20 trap nights conducted in territory; 1 or 2 pups and 2-3 adults heard on one howl survey on 14 August 2001.

Torch River Pack - Ashland County Wolf 248M (adult male) occupied a 25 square mile home range (21 locations); 1-2 adults and 4 or more pups heard on howl survey on 5 July 2001.

Shanagolden Pack - Ashland County Three wolves in pack last winter; no livetrapping or howl surveys during summer.

Hungry Run Pair - Ashland County Two wolves last winter; no livetrapping or howl surveys during summer.

West Firelane Pack - Ashland County Two wolves last winter; wolf M036F occupied a summer home range of 9 square miles (20 locations); no howl surveys, but pups probably were produced based on concentrated radio locations.

Morrison Creek Pack - Ashland & Iron Counties Three wolves in this pack last winter; wolf M036F initially seemed a member of this pack; no howl surveys during summer.

Brunet River Pack - Sawyer County Wolf 286F (adult female) occupied a 36 square mile area (21 locations); only two detected last winter; only 1 adult responded on howl survey; pup production not suspected.

Log Creek Pack - Sawyer, Price & Ashland Counties Three wolves detected last winter; no livetrapping, and 2 howl surveys, but territory may have shifted; no pups or adults detected by howl survey.

Thornapple River Pack - Sawyer County Two wolves detected last winter; no surveys during summer.

Tupper Creek Pack - Sawyer County Two wolves detected last winter; no surveys during summer.

Haystack Corner Pack - Sawyer & Rusk Counties Three wolves detected last winter; no surveys during summer.

Blue Hills Pack - Rusk and Sawyer Counties Five wolves detected last winter; one survey with 1 or more adults heard and 2 or more pups heard on 24 August 2001; no livetrapping conducted.

Kidrick Swamp Pack - Taylor County Five wolves detected last winter; livetrapping conducted on 84 trap nights, but no captures; no howl surveys, but pup production suspected; one dog killed in August.

Brush Creek Pack - Ashland County Eight wolves detected last winter; wolf M310M covered a 39 square mile (21 locations) home range; no howl surveys, but pup production suspected.

Augustine Lake Pack - Iron & Ashland Counties Five wolves detected last winter; no howl or livetrapping surveys; pup production may have occurred.

Penokee Ridge Pack - Ashland County Reports were received of 1-3 wolves roaming area south and east of Mellen; none responded to howl survey.

O'Brien Lake Pack - Iron County Three wolves detected last winter; livetrapping conducted on 15 trap nights, but no captures; no howl surveys, but volunteer heard 2 adults and 2+ pups on 28 August 2001.

Eastside Firelane Pack - Ashland County Three wolves detected last winter; no surveys conducted over winter.

Chippewa River Pack - Ashland & Iron Counties Nine wolves detected last winter; wolf 351M occupied 28 square mile home range (17 locations) during summer; no howl surveys, but pup production suspected.

Chaney Lake Pack - Gogebic & Iron Counties Seven wolves detected in this pack along Wisconsin-Michigan border; no howl surveys in 2001.

Pine Lake Pack - Iron County Five wolves detected last winter; no livetrapping conducted; one howl survey on 4 September and 3-4 adults and 4-5 pups heard.

Murrays Landing Pack - Iron County Two wolves detected last winter; one wolf observed during summer; no howl or trapping surveys.

Hoffman Lake Pack - Price & Ashland Counties Five wolves detected last winter; adult female 245F occupied a summer home range of 25 square miles (17 locations); 2 howl surveys and 2-3 pups heard on 11 July 2001.

Wintergreen Lake Pack - Price County Three wolves detected last winter; 3 howl surveys and 2+ pups heard on 11 July 2001; wolf 316F (subordinate adult female) occupied a summer home range of 46 square miles (16 locations).

Clifford Pack - Price & Oneida County One wolf detected over winter; sign in summer indicated 2 wolves; livetrapping conducted on 47 trap nights; 2 howl surveys, but no responses.

Wilson Flowage Pack - Price County Three wolves detected last winter; livetrapping conducted on 48 trap nights; no captures; one howl survey, with no responses; this pack may have been reduced to 1 or 2 wolves.

Bootjack Lake Pack - Oneida County Two wolves detected last winter; yearling male 336M caught on 3 June 2001 after 48 trap nights; he occupied a 27 square mile home range (13 locations); one howl survey on 17 July 2001 when 4 or more pups and 2 adults heard; 4 pups from depredating pack in Burnett County released in this pack in late August/early September, but only one remained alive at end of September (393F).

Davis Lake Pack - Price County Two wolves detected in area last winter; no surveys in summer; remains of dead adult male found on 27 August 2001.

Price Creek Pack - Price & Sawyer Counties Four wolves detected last winter; adult male 368M caught on 12 July 2001 after 15 trap nights; he occupied a summer home range of at least 22 square miles (9 locations); 2+ pups and 2+ adults heard on howl survey on 17 July 2001.

Spirit Lake Pack - Lincoln, Price & Taylor Counties Two wolves detected last winter; 2 howl surveys, and 2+ pups detected on 8 August 2001; a calf depredation in August appeared due to this pack.

Little Rice River Pack - Oneida County The alpha female of this pack was killed in February 2001, and no wolves were found in the pack at the end of winter; yearling female 376F was caught in this territory on 12 June 2001 after 21 trap nights; she occupied a home range of 14 square miles (11 locations); no wolves were heard in 3 howl surveys; wolves may have re-established in this area, but it did not appear that pups were produced; wolf 376F may be a disperser just recently established.

North Willow Pack - Oneida County Four wolves detected last winter; wolf 244F (adult female) went off the air after 12 June 2001 after being on the air for nearly 4 years; adult male 355M was caught on 28 June after 30 trap nights; he occupied a 15 square mile home range (10 locations) in summer; 2+ pups heard on howl surveys on 14 July and 7 September.

Scotchman Lake Pack - Oneida County Two wolves detected last winter; no summer howl surveys or livetrapping.

Ranger Island Pack - Lincoln County Six wolves detected last winter; wolf 285F (adult female) occupied a summer home range of 11 square miles (18 locations); two howl surveys conducted in August and 2-3+ pups heard.

Harrison Hills Pack - Lincoln County No wolves detected during winter; adult female (300F) was caught on 18 May after 43 trap nights; she occupied a summer home range of 7 square miles (15 locations); wolf 300F was lactating at the time of capture; 2 howl surveys conducted and 2+ pups heard on 25 August, along with at least 2 adults.

Averill Creek Pack - Lincoln County Five wolves detected last winter; no livetrapping conducted; 4 howl surveys and response only by 1 adult; pup production not suspected.

Nineweb Lake Pack - Vilas County Three wolves detected last winter; no livetrapping; no response to single howl survey.

Pioneer Creek Pack - Vilas County Single wolf (?) last winter; home range of wolf 289F was 75 square miles (63 satellite locations); no howl surveys.

Pelican Lake Pack - Oneida County One wolf detected last winter, but a second wolf may have been overlooked; wolf 332F occupied a 9 square mile home range during summer (18 locations); 2 adults and 2+ pups were heard on 27 September 2001.

Giant Pine Pack - Forest County Two wolves detected last winter; no wolves heard during 1 howl survey; no livetrapping done.

Iron Run - Clark County Two wolves detected last winter; wolf 309F (adult female) occupied a summer home range of 57 square miles (26 locations); 2 adults responded at 2 of 8 howl surveys; but no pups responded.

Noch Hanai Pack - Jackson County Four wolves detected last winter; two howl surveys, but no wolves responded.

Two Korners Pack - Jackson & Clark Counties Two wolves detected last winter; three howl surveys, but no responses.

Pray Pack (269M) - Jackson & Clark Counties Wolf 269M settled between Noch Hanai and Two Korne Packs last winter; 269M appeared to start new pack or join one of these other packs; wolf 269M occupied a summer home range of 24 square miles (26 locations); he was recaptured on 13 July 2001 after 6 trap nights; 2 or more pups heard on 9 July in territory.

Wildcat Mound Pack - Jackson County Five wolves detected last winter; yearling female 341F caught 31 May after 5 trap nights; she occupied a summer home range of 37 square miles (21 locations); 4+ pups heard on 2 howl surveys on 29 May and 3 July.

Bear Bluff Pack - Jackson County Five wolves in pack last winter; adult female 311F occupied 110 square mile home range as determined by 73 satellite locations; 5 pups caught in July with 30 trap nights and male pup 338M collared (other captures: 312M, 339F, 349F, 350F); during the next month and a half 338M occupied a 4 square mile home range (12 locations); 2+ pups heard on howl survey on 11 July, but based on captures at least 5 pups present.

South Bluff/Beaver Creek Area - Juneau, Wood & Jackson Counties A distinct pack was not verified in the northwest corner of Juneau County last winter in the area of Beaver Creek or South Bluff; wolf 243M, an old adult male was caught on 12 June 2001 after 33 trap nights; he roamed an extensive area from the corner of Jackson, Monroe and Juneau counties to south of Pittsville, 20 miles to the northeast; one howl survey with no response.

Yellow River/Beaver Creek Pack - Juneau County Five wolves detected last winter; yearling female 340F caught on 5 August 2001 after 162 trap nights; she occupied a 9 square mile area (10 locations) over the next month and half in northern Necedah National Wildlife Refuge, and Yellow River Bottoms to the east. Two howl surveys and 3 pups heard on 2 August.

Suk Cerney Pack - Juneau County Five wolves detected last winter; adult male 342M and 3 female pups (344F, 345F, 347F) were caught in mid August; 342M occupied an 18 square mile area (7 locations) over the next month; 3-5 pups heard in 2 of 3 howl surveys.

Dead Creek Pack - Monroe & Jackson Counties Five wolves detected last winter; adult male 348M caught 23 May after 65 trap nights, and occupied 13 square mile area (21 locations) over summer; 5-6 pups heard on 19 June 2001.

Fort McCoy - Monroe County One wolf detected last winter; 198 trap nights of livetrapping conducted from April to August, but no captures; a second wolf may have moved onto the military base.

### Dispersing and Translocated Wolves

Wolf 318F Wolf 318F was caught as a yearling female in the Nineweb Lake pack of northcentral Vilas County on 10 May 2000. She began extensive moves into Michigan in December 2000, and during winter 2000-2001 made 3 moves north into the western Upper Peninsula of Michigan, but made 3 return trips to her home territory. After 14 March, she made her final move from her natal pack to southwest Houghton County, 40 miles to the northeast. She was last located by WDNR on 25 May 2001, and was caught by Michigan DNR 31 May 2001, and became wolf 7704. She had moved 133 miles to the east in 6 days, and 165 miles northeast of her original natal territory.

Wolf 343M Wolf 343M was captured in the northwest corner of Juneau County on 12 June 2001. He did not appear to be a member of a pack at the time. He traveled extensively from southeast Jackson County, to south of Pittsville in Wood County, 20 miles to the northeast. Travels included northern portions of the Dead Creek Pack and eastern portions of the Bear Bluff Pack. He also traveled around the Sandhill Wildlife area. He appeared to be still dispersing at the end of the period.

Wolf 376F Wolf 376F (yearling female) was caught on 12 June 2001 in the area of the Little Rice River pack. This pack had gone extinct during the winter. Wolf 376F probably recently moved into the area. She occupied a small home range on the east side of the territory, but made trips 6 miles to the west and 5 miles southwest. She may not have completed dispersal at the end of the period.

Wolves 390F, 391M, 392M and 393F These four pups were caught with the Chase Brook pack involved in livestock depredation on a farm in northern Burnett County. The 4 pups were captured between 25 and 31 July 2001. They were held in captivity in August, and on 20 August were placed in an isolation pen in the Bootjack Lake Pack area of northwest Oneida County. Their location was 116 miles east of their natal pack. Attempts were made to cross-foster these pups to the Bootjack Lake Pack. Deer carcasses were left near the isolation pen to attract members of the Bootjack Pack. On 28 August, 392M and 393F were released, and 391M and 390F were released on 3 September. Wolf 392M was found dead on 3 September due to pneumonia. Wolf 390F was found dead on 12 September due to pneumonia, and wolf 391M was found dead on 17 September probably due to attack by other wolves. At the end of the period, female pup 393F remained alive in the western portions of the Bootjack Lake Pack territory.

Wolf 394M This yearling male from the Chase Brook Pack was caught on a farm with calf depredation in northern Burnett County on 5 August 2001. He was released in northern Forest County in the Nicolet National Forest on 21 August about 170 miles east of the depredation site. He was located 1/2 mile to the east a day later, but was lost thereafter, and reappeared in northern Forest County in mid-October 2001.

Wolf 395M This adult male was caught with adult female 724F on 16 August 2001 on a farm in northern Burnett County suffering depredation on calves. Both were released in northern Forest County in the Nicolet National Forest on 11 September 2001. Because plane flights were not allowed for the next 10 days due to terrorist attacks on the World Trade Center in New York, the wolf was not relocated until early October, when he was found in northern Lincoln County.

Wolf 724F Wolf 724F had been on the air in Burnett and Douglas Counties since 28 May 1997. She had been the alpha female of the Chase Brook Pack from 1997 through 2000. She was again captured in 1998 and 1999 in relationship to calf depredations on a farm in northern Burnett County. Shock collars were placed on her in 1998 and 1999 to keep her off the farm. In 2001, 724F occupied a home range east of Highway 35, separate from the main portions of the Chase Brook Pack. It appeared that wolf 367F had become the new alpha female. On 16 August 2001, wolf 724F was captured on the farm, and was the first time during the summer that she traveled west of Highway 35. She and male 395M were captured at the same time, and were released 170 miles to the east in Forest County on 11 September 2001. She initially moved to the southwest in late September to Pelican

Lake in the area occupied by 332F, in southern Oneida County. The location was about 34 miles southwest of its release site, but not likely to be the end of extensive movements by this wolf.

### Summary of Howl surveys

Statewide, 79 howl surveys were conducted in 41 packs. Over 62 pups were heard or observed in 23 different packs across Wisconsin, averaging 2.7 pups per pack (Table 4). This is similar to the results of howl surveys conducted last year. Throughout the state, wolves were heard at 50 of 478 howl stops for a success rate of 10.5%. In the central forest, 27 surveys were conducted in 10 packs. Howl success rate was 13.6% and pup production averaged 3.0 pups per pack. In the northern forest region, 52 surveys were conducted in 31 packs. Howl success rate was 9.2% and pup production averaged 2.6 pups per pack.

### Reported Wolf Observations

A total of 40 "probable" and "possible" wolf observations were reported for April - June 2001 (Table 5), and a total of 93 observations were reported for July-September 2001 (Table 6). This compares with 56 observations reported for the first quarter of 2001, and is higher than reports from the same periods last year. Reports were received from 24 counties including 18 of the 20 counties with known breeding packs. Counties with the highest reporting rates were Iron (18), Ashland (14), Bayfield (12), Oneida (12), and Price (11). There were several reports (9) from Florence County, where no breeding pack is known to occur. All 9 reports were of a single wolf.

### Wolf Mortality and Health

Ten wolves, including 4 radio collared wolves, were found dead between April and September 2001 (Table 7). Adult female 352F died after capture on 1 May 2001 after she aspirated food. Two of four pups translocated to Oneida County from Burnett County died from pneumonia, and a third pup died from attack by another wolf. The capture, translocation and confinement in captivity were probably factors in the cause of their death. Four of six non collared wolves died from vehicle collisions, 1 appeared killed by other wolves, and one died from unknown causes.

Four of 35 captured wolves had severe cases of alopecia suggesting sarcoptic mange infections (342M, 344F, 345F, and 347F). These were all members of the Suk Cerney Pack. Two wolves also had slight hair loss suggesting possible mange infection including pup 366M from the Little Sioux River/Siskiwit Lake Pack, and a yearling female 376F in the Little Rice River area.

Blood samples were collected from about 23 wolves and test results will be listed in a future report.

### Wolf Depredation

Fourteen cases of wolf depredation on domestic animals occurred during the period April through September 2001 (Table 8). These included 4 cases of depredation on livestock or poultry, 9 cases of depredation on dogs, and 1 case of human safety concern. A dog was also slightly injured in one of the livestock/poultry depredations. The human safety concern occurred in early June when a bold acting wolf lunged at vehicles along Highway 53 south of Minong. Because of concerns of the wolf's behavior, authority was obtained from the U.S. Fish and Wildlife Service to shoot the wolf, and USDA-Wildlife Service began livetrapping. After control actions began, the wolf disappeared.

Livestock and poultry depredations included 2 farms with losses of single calves, one farm with loss of at least 9 calves, and one farm that had apparent depredation on 18 poultry. Three or four different packs were apparently involved in these depredations.

Control actions were conducted by USDA-Wildlife Services on the farm in northern Burnett County. This farm had lost calves to wolf depredation every year since 1995, except in 1999 when a shock collar was successful in keeping the alpha female (724F) of the Chase Brook Pack off the farm.

Adult female 367F, the new alpha female for the Chase Brook Pack was caught on 26 May 2001 after 6 calves were killed. Because 367F was lactating and apparently had pups in the area, she was released 3.5 miles from the farm and was fitted with a radio collar and dog shock collar. Over the next week and a half, three trigger devices were set on the farm to shock the wolf if she approached within 0.25 miles of the devices. This appeared successful at reducing depredations for the next 1 1/2 months, and kept 367F off the farm.

Calf depredation resumed on 17 July in the western part of the farm when most cattle and all 3 trigger devices were moved to the eastern side of the farm. USDA-Wildlife Services resumed trapping on 19 July, and by 16 August, had captured four pups, one yearling male, an adult male, and an adult female (724F, previous alpha female). The adults and yearling were translocated 170 miles to the east into northern Forest County. It seemed likely the pups would be abandoned in a new location, thus we attempted to cross-foster them into an existing pack. The pups were placed in an isolation pen in the Bootjack Lake Pack area on 20 August. Deer carcasses were placed nearby to attract members of the pack. Two pups (392M and 393F) were released on 28 August and two were released on 3 September (391M and 390F). Three pups died over the next two weeks (390F, 391M, and 392M), but pup 393F remained alive to the end of the study period. Two pups died from pneumonia and one apparently by an attack from other wolves.

A record number of dogs were killed by wolves in summer 2001. Fifteen were killed this summer, compared to the previous high of 11 in 1998. All dogs killed in 2001 were hounds in the act of training or hunting for bears. In 2001, when wolf numbers were similar, only 5 were killed, and only 1 was a hound being used for bear hunting or training. Nine of the dogs killed (60%) were by two new packs, the Casey Creek Pack, and the Little Sioux River/Siskiwit Lake Pack. Four other packs were involved in depredation on bear hunting dogs. The DNR will be working with the Wisconsin Bear Hunters' Association to explore ways to reduce wolf depredation on bear hunting dogs. Since 1986, 49 dogs have been killed by wolves in Wisconsin, but most have been since 1996 (88%).

### PLANS FOR NEXT STUDY PERIOD

Aerial telemetry will be used to attempt to obtain complete counts on all radio collared packs, and snow tracking will be used to count wolves in packs not collared. Intense monitoring will continue on wolves translocated from livestock depredations, and intense monitoring will be done during the state hunting seasons. Training and guidance will be given to over 100 volunteers who will assist with snow track surveys; this will be the 7th year the volunteer tracking program is being used.

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Note: This report is a preliminary progress report and should not be construed as a finalized publication. Some of the numbers of pack size, composition, population figures, and other information may change as more data becomes available. Persons wishing to cite figures within the report should consult with the author. Persons wishing to cite figures on the Highway 53 Wolf Study should contact Bruce Kohn directly